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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,870	06/27/2003	Kentin L. Alford	BA4-158	7089
21567	7590	01/24/2008		
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			EXAMINER JOLLEY, KIRSTEN	
			ART UNIT 1792	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/607,870	<b>Applicant(s)</b> ALFORD ET AL.	
	<b>Examiner</b> Kirsten C. Jolley	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-18,30 and 32-42 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 and 40-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,14-18,30 and 32-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1, 3-18, 30, and 32-42 are pending.
2. Claims 9-13 and 40-42 remain withdrawn from consideration as being drawn to a non-elected invention.
3. The claim identifiers for claims 9-13 and 40-42 should be updated to reflect that the claims are "withdrawn".

### ***Priority***

4. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosures of the prior-filed applications, Application Nos. 10/346,866, 09/528,345, and 09/272,762, fail to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application.

Claims 1 and 30 have been amended to no longer recite a pressure of at least 30 psi, and therefore the priority date of independent claims 1 and 30, as well as dependent claims 14-15, 32-33, and 40-42, are entitled the filing date of the parent applications of March 19, 1999. However, dependent claims 3-13, 16-18, and 34-39 contain limitations that were not disclosed in the parent applications (i.e., the specific pressures claimed, use of glass or carbon or silicon wafer or silicon carbide, or broad aluminum-comprising or titanium-comprising substrates, as well as claimed exposure times). The priority date of dependent claims 3-13, 16-18, and 34-39 are thus given the priority date of the instant application of June 27, 2003.

#### ***Response to Arguments***

5. Applicant's arguments filed November 13, 2007 have been fully considered but they are not persuasive.

Applicant argues that Fukushima is not prior art relative to the present claims in response to the amendments to the claims. The Examiner agrees that Fukushima is not prior art relative to amended independent claims 1 and 30, however the rejections over Fukushima et al. are maintained over dependent claims 3-8, 16-18, and 34-39 since Fukushima remains valid prior art over these claims.

Any claim in a continuation-in-part application which is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent nonprovisional application is entitled to

the benefit of the filing date of the parent nonprovisional application. However, if a claim in a continuation-in-part application recites a feature which was not disclosed or adequately supported by a proper disclosure under 35 U.S.C. 112 in the parent nonprovisional application, but which was first introduced or adequately supported in the continuation-in-part application, such a claim is entitled only to the filing date of the continuation-in-part application; *In re Chu*, 66 F.3d 292, 36 USPQ2d 1089 (Fed. Cir. 1995); *Transco Products, Inc. v. Performance Contracting Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994); *In re Van Lagenhoven*, 458 F.2d 132, 136, 173 USPQ 426, 429 (CCPA 1972); and *Chromalloy American Corp. v. Alloy Surfaces Co., Inc.*, 339 F. Supp. 859, 874, 173 USPQ 295, 306 (D. Del. 1972). See MPEP 201.11.

Regarding the Combes reference, Applicant argues that nowhere does the reference indicate “compounds or products limited to monomer formation.” As a note, it appears that Applicant intended to mean compounds or products limited to *monolayer* formation. While the Examiner agrees that Combes does not specifically mention that a monolayer is formed, Combes et al. discloses at col. 4, lines 50-55 that the organosilanes form a coating on the oxide substrates by reacting with surface OH groups on the oxide to form a surface-oxygen-silicon treated surface. Since the coating is *only* formed by reaction of the organosilanes with surface OH groups, a monolayer must inherently be formed since reaction/coating will not continue once all of the OH surface groups are reacted.

Regarding the combination of Mankell with Fukushima or Combes, see the arguments discussed above.

*Claim Rejections – 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 3-4, 7, 16-18, 34-35, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukushima et al. (US 2002/0197879).

The claims remain rejected over the prior art of Fukushima et al. for the reasons discussed in the prior Office action, as well as for the reasons discussed above in sections 4 and 5.

8. Claims 1, 3-6, 14-18, 30, and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Combes et al. (US 5,725,987).

The claims remain rejected for the same reasons discussed in the prior Office action as well as for the reasons discussed above in section 5.

***Claim Rejections – 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-6 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al.

The claims remain rejected for the same reasons discussed in the prior Office action as well as for the reasons discussed above in section 5.

11. Claims 1, 3-8, 14-18, 30, and 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mankell et al. (US 2002/0127399) taken in view of Combes et al.

The claims remain rejected for the same reasons discussed in the prior Office action as well as for the reasons discussed above in section 5.

12. Claims 3-8, 16-18, and 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mankell et al. (US 2002/0127399) taken in view of Fukushima et al.

The claims remain rejected for the same reasons discussed in the prior Office action as well as for the reasons discussed above in section 5.

*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cao and McCarthy's "Formation of Trialkyl Silyl Monolayers on Si(100) Using Organosilanes in Carbon Dioxide" is cited for its similar teaching of using carbon dioxide under pressure of 950 psi to deposit a monolayer on a silicon wafer surface.

Enick et al. (US 6,183,815) is cited for its teaching of coating a metal surface with a monolayer comprising exposing the substrate surface to a thiol-containing precursor under pressure using liquid carbon dioxide as the solvent (col. 3, lines 63-67).

Yang et al. (US 6,716,378) is cited for its teaching of using pressure of 100,000-200,000 Pa (14.9-29 psi) to form a monolayer on at least a portion of the substrate.

Maracas et al. (US 5,669,303) is cited for its teaching of using pressure to form a self-assembled monolayer on at least a portion of the substrate.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

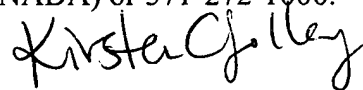


CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C. Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Tuesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Primary Examiner  
Art Unit 1792